

U.S. Appln. No. 10/090,546
Atty. Docket No. 01-4004D

REMARKS

Claims 1-16 are pending in this application, with claims 1, 5, 9, and 13 being independent. Claim 1, 5, 9 and 13 have been amended. Favorable reconsideration and allowance are respectfully requested.

The Office Action rejected claims 1-16 under 35 U.S.C. § 103 as obvious from U.S. Patent No. 6,741,697 (Benson) in view of U.S. Patent Application Publication No. US 2002/0118813 (Brehm) and in further in view of U.S. Patent No. 5,946,375 (Pattison). This rejection is respectfully traversed.

Touch-tone IVR systems, which were introduced over a decade ago, are perhaps the most widespread class of human-computer interfaces. Since their inception, such systems have been adopted enthusiastically, particularly to perform customer-support types of functions, and have permitted their adopters to reduce significantly the amount of manpower required to maintain a call center. When configured properly, IVR systems can allow more customers to be provided with more support and services more quickly than ever before, and can streamline greatly the call center interaction process.

Nonetheless, many calling customers have classically exhibited an antipathy towards IVR systems, viewing them as frustrating and difficult to use. Such problems generally stem not from the fact that interacting with an IVR system is an inherently complex task, but rather from the fact that the systems are often poorly configured, particularly from the point of view of their usability. As a result, it has become extremely desirable to have tools which allow the manner in which an IVR system is used to be tracked and effectively evaluated, so that the systems usage may be assessed with an eye towards improvement.

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Equally as significant as tracking the use, is visually representing that use in a manner such that it is communicated effectively and concisely to a system evaluator. Such visual representation technique should be flexible and robust enough to communicate to the evaluator even the most complex patterns of user behavior in an IVR system.

To achieve these goals, the present invention as recited in claim 1 provides a method of visually representing call events and completion times on a call-type basis for a call to a call processing center. A recording of calls from end to end is obtained, and events of interest that occurred are time stamped. Significantly, call types are determined by categorizing calls into several call types, in accordance with the manner in which the call was handled by the call processing center. Time stamp data for predetermined significant events are segregated to provide timings, and timings are tabulated by call type. Then, bar graphs are prepared and visually displayed to illustrate the timings of the significant events for each of the call types.

In this manner, the present invention provides to the evaluator useful information on each of the call types in a concise and readily comprehensible way. In particular, by categorizing calls into several call types in accordance with the manner in which calls are handled by the call processing center, an evaluator can quickly and conveniently ascertain information on those calls that were handled by the call center in a particular way. This important feature is neither taught nor suggested by the prior art.

The Office Action's primary reference, Benson, relates to telephone call center performance evaluation, and in particular relates to acquiring automatic number identification (ANI) information when a call is made, and then searching for stored information associated with that ANI, such as a customer's name. The Office Action

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concedes that Benson fails to disclose categorizing a call into one of a plurality of call types in accordance with a manner in which the call was handled, and plainly that is the case. For that feature, the Office Action looks to Pattison. Applicants respectfully submit that that important feature is absent from Pattison as well, and that Pattison therefore cannot correct the deficiencies of Benson.

More specifically, Pattison relates to methods and systems for monitoring call center service representatives, and in Fig. 12 depicts a scheduler 604. Unlike the present invention, which is concerned with visually representing call events and completion times, the scheduler in Pattison is concerned with establishing a schedule 600 for defining monitoring periods. The scheduler 604 receives various pieces of call type information that enable it to define such schedules. Pattison describes the specifics of such call type information as follows:

... scheduler 604 may receive call type information 612 that comprises call setup information, automatic number identification (ANI) information, active extensions, customer information either provided as in-band or out-of-band signaling or retrieved from a database accessible by adjunct 33 or other components, and other information identifying the type of call, the customer, or other information regarding the call received at the call center.

Col. 25:27-34.

As can be seen readily, the so-called call type information of Pattison has everything to do with information “identifying they type of call, the customer or other information regarding the call received at the call center.” Col. 25:33-34. That is to say, it has to do with information inherent to the received call. That inherent information is

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provided to the scheduler 604 to allow it to schedule the monitoring of certain types of calls received by the call center. For example, the scheduler 604 might be configured to monitor all calls that come from a particular customer or group of customers, based upon ANI information in a received call.

In the present invention, in stark contrast, calls are categorized into one of a plurality of call types in accordance with a manner in which the call was handled by the call processing center. Such categorization, therefore, is not performed based upon information inherent to the received call, but is rather based upon an external factor, namely the manner in which the center handled the call. It is by categorizing the calls on that basis that such useful information can be provided to the evaluator.

In view of the fundamental difference between information inherent to a received call (such as ANI information) on the one hand, and the manner in which the call center handled a received call on the other, Applicants respectfully submit that Pattison cannot possibly render obvious the claim 1 invention.

Brehm relates to systems and methods for verifying usage and quality of interconnection services, and is cited by the Office Action as showing bar graphs. The Office Action does not contend that Brehm shows the call type determination feature discussed above, and of course it does not. Brehm, therefore, cannot correct the deficiencies of Benson or Pattison.

Accordingly, Applicants respectfully submit that claim 1 is not obvious from Benson, Pattison or Brehm, or their combination, and respectfully request the Examiner to remove the corresponding Section 103 rejection.

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Independent claims 5, 9 and 13 are directed to apparatuses, systems or computer program products that incorporate the salient features of claim 1 discussed above. In particular, all of those claims recite determining a call type by categorizing the call into one of a plurality of call types in accordance with a manner in which the call was handled by the call processing center. Those claims, therefore, are patentable for the same reasons as claim 1.

The remaining claims all depend from one of the independent claims discussed above, and each partakes in the novelty and non-obviousness of its respective base claim. In addition, each recites additional patentable features of the present invention, and individual reconsideration and allowance of each are respectfully requested.

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CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and passage to issue of the present application.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 07-2347. If an extension of time under 37 C.F.R. § 1.136 not accounted for above is required, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,



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